

**Worksheet – Multiplying and Dividing Non-Variable Radical Expressions Containing Squares Roots**

Directions: Please simplify the following. Express your answers with exact numbers.

1.  $\sqrt{6} \cdot \sqrt{6}$   
 $\sqrt{36}$   
 $6$

2.  $\sqrt{14} \cdot \sqrt{10}$   
 $\sqrt{140}$   
 $\sqrt{4 \cdot 35}$   
 $2\sqrt{35}$

3.  $5\sqrt{3} \cdot 3\sqrt{6} \cdot 2\sqrt{5}$   
 $30\sqrt{90}$   
 $30 \cdot 3\sqrt{10}$   
 $90\sqrt{10}$

4.  $5\sqrt{10} \cdot \sqrt{20}$   
 $5\sqrt{200}$   
 $5 \cdot 10\sqrt{2}$   
 $50\sqrt{2}$

5.  $-\sqrt{6} \cdot 4\sqrt{8}$   
 $-4\sqrt{48}$   
 $-4 \cdot 4\sqrt{3}$   
 $-16\sqrt{3}$

6.  $-3\sqrt{5} \cdot 2\sqrt{25}$   
 $-3\sqrt{5} \cdot 2 \cdot 5$   
 $-30\sqrt{5}$

7.  $3\sqrt{12} \cdot \sqrt{12} \cdot \sqrt{2}$   
 $3 \cdot 12 \cdot \sqrt{2}$   
 $36\sqrt{2}$

8.  $-6\sqrt{2} \cdot 5\sqrt{26}$   
 $-30\sqrt{52}$   
 $-30 \cdot 2\sqrt{13}$   
 $-60\sqrt{13}$

9.  $\sqrt{2} \cdot \sqrt{6} \cdot \sqrt{15}$   
 $\sqrt{180}$   
 $\sqrt{36 \cdot 5}$   
 $6\sqrt{5}$

10.  $\frac{10\sqrt{7}}{5\sqrt{7}}$   
 $2$

11.  $\frac{10\sqrt{18}}{8\sqrt{6}}$   
 $\frac{5\sqrt{3}}{4}$

12.  $-\frac{12\sqrt{75}}{2\sqrt{5}}$   
 $-6\sqrt{15}$

13.  $\frac{\sqrt{24}}{4}$   
 $\frac{\sqrt{6}}{4}$   
 $\frac{\sqrt{6}}{2}$

14.  $\frac{75\sqrt{28}}{5\sqrt{7}}$   
 $15\sqrt{4}$   
 $15 \cdot 2$   
 $30$

15.  $\frac{20\sqrt{135}}{4\sqrt{5}}$   
 $5\sqrt{27}$   
 $5 \cdot 3\sqrt{3}$   
 $15\sqrt{3}$

16.  $-\frac{\sqrt{80}}{7\sqrt{10}}$   
 $-\frac{\sqrt{8}}{7}$   
 $-\frac{2\sqrt{2}}{7}$

17.  $\frac{\sqrt{48}}{\sqrt{16}}$   
 $\sqrt{3}$

18.  $\frac{10\sqrt{6} \cdot 6\sqrt{48}}{3\sqrt{4}}$   
 $10\sqrt{6} \cdot 2\sqrt{12}$   
 $20\sqrt{72}$   
 $20 \cdot 6\sqrt{2}$   
 $120\sqrt{2}$

19.  $\frac{\sqrt{7} \cdot 10\sqrt{3}}{8\sqrt{21}}$   
 $\frac{10\sqrt{21}}{8\sqrt{21}}$   
 $\frac{5}{4}$

20.  $-\frac{30\sqrt{96}}{20\sqrt{12}}$   
 $-\frac{3\sqrt{8}}{2}$   
 $-\frac{3 \cdot 2\sqrt{2}}{2}$   
 $-3\sqrt{2}$